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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,892	04/20/2005	Yuuji Ide	NIS-16060	6086
40854	7590	07/07/2006	EXAMINER	
RANKIN, HILL, PORTER & CLARK LLP 4080 ERIE STREET WILLOUGHBY, OH 44094-7836			SMITH, TYRONE W	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,892	<b>Applicant(s)</b> IDE, YUUJI	
	<b>Examiner</b> Tyrone W. Smith	<b>Art Unit</b> 2837	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 4-9 and 13-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/20/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 10-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuruta (6204622) in view of Yoshizawa et al (JP08-084490).

Regarding Claims 1 and 10. Tsuruta discloses a position controller (Figure 1) which includes a position detection unit (figure 1 item 16) for detecting a position of a motor to be controlled; a speed calculation unit (Figure 1 item 17) for calculating a speed of the motor; a position control unit (Figure 1 item 12) for performing a position control by outputting a speed command so that the motor position fed back from the position detection unit is consistent with a position indicated by a position command; a speed control unit (Figure 1 item 13) for performing a speed control based on a proportional-integral control by outputting a torque command so that the speed fed back from the speed calculation unit is consistent with the speed indicated by the speed command; and a torque control unit (Figure 1 item 14) for performing a torque control based on the torque command. Tsuruta discloses a speed control unit that includes an integral control system including a speed integrator, the speed integrator (Figure 3 item 133; column 3 lines 10-36) being adapted to integrate a speed difference between a speed indicated by command speed and the speed of the motor; a proportional control system (Figure 3 item 136; column 3 lines 10-36) for outputting a command proportional to a difference between the speed

indicated by the speed command and the speed of the motor; an addition means (Figure 3 item 138; column 3 lines 10-36) for adding an output of the integral control system and an output of the proportional control system, and a multiplication means (Figure 3 item 139; column 3 lines 10-36) for multiplying an output of the addition means by a speed proportional gain to produce the torque command. However, Tsuruta does not disclose delay compensation low pass filter in the speed control unit having a transfer function corresponding to a speed control system.

Yoshizawa discloses a speed control method for a motor, which includes a delay compensation low pass filter/compensation circuit (Figure 1 item 1; refer to the constitution) in the speed control section having a transfer function corresponding to a speed control system. It should be noted that the compensation unit of Yoshizawa can be implemented within a singular speed control unit for controlling the motor.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Yoshizawa's compensation circuit with the invention of Tsuruta. The advantage of combining the two inventions would provide a system that can speed productivity of a system while avoiding degradation quality by employing a compensation type circuit.

Regarding Claims 2 and 11. Tsuruta discloses a speed feedback low-pass filter (Figure 3 item 131) having a transfer function that prevents ripples caused by quantization errors and/or position errors detected by the position detection unit, from appearing in the torque command, wherein the proportional control system includes a subtraction means (Figure 3 item 132) for calculating a difference between a filtered speed and the speed indicated by the speed command, the filtered speed being obtained by inputting the speed into the speed feedback low-pass filter.

Regarding Claims 3 and 12. Tsuruta discloses a position controller with a subtraction means (Figure 2 item 121) for calculating a position difference between the position indicated by

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the position command and the position detected by the position detection unit and a position loop multiplication means (Figure 2 item 122) for multiplying the position difference by a position proportional gain.

**Allowable Subject Matter**

3. Claims 4-9 and 13-20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan, can be reached on 571-272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith  
Patent Examiner

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LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER